# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/713,853 | 11/14/2003 | Christopher Lynn Tycho Brown | 16666-002001 | 2765 |

| 20985     7590     01/24/2006 | EXAMINER |
|---|---|
| FISH & RICHARDSON, PC | HEIN, GREGORY P |
| P.O. BOX 1022 | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2188 | |

MINNEAPOLIS, MN 55440-1022

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/713,853 | BROWN, CHRISTOPHER LYNN TYCHO |
| | Examiner | Art Unit | |
| | Gregory P. Hein | 2188 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on *14 November 2003*.
2a) ☐ This action is **FINAL**.  2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1 - 37* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1 - 21, 23 - 24, 26, 30, and 36* is/are rejected.
7) ☒ Claim(s) *22, 25, 27 - 29, 31 - 35, and 37* is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All  b) ☐ Some * c) ☐ None of:
        1. ☐ Certified copies of the priority documents have been received.
        2. ☐ Certified copies of the priority documents have been received in Application No. _____.
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/14/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 includes "An article comprising a machine-readable medium." The specification defines in ¶18 a machine-readable medium as non-statutory subject matter. Software products, computer program products and machine-readable signals are not patentable subject matter.

All dependent claims are rejected with the same rationale as the claim they depend from.

### *Claim Rejections - 35 USC § 112*

1.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.      Claims 1, 16, 23, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3.      The term "information indicative of instructions" has unclear meaning as used in

claim 1 rendering the claim unclear.  It is unclear if the phrase refers to actual

instructions or to information requiring instructions.  For the purposes of this action

examiner is treating the "information indicative of instructions" as "instructions embodied

on a machine readable medium."

4.      The term "small packet" in claims 16 and 23 and 30 is a relative term which

renders the claim indefinite.  The term "small packet" is not defined by the claim, the

specification does not provide a standard for ascertaining the requisite degree, and one

of ordinary skill in the art would not be reasonably apprised of the scope of the

invention.

## Claim Rejections - 35 USC § 102

1.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.      Claims 1, 3, 4 – 5, 8 – 10, 36, and 6 are rejected under 35 U.S.C. 102(b) as

being anticipated by U.S. Pre-Grant Publication 2002/0133702 (Stevens).

As per claim 1, Stevens teaches:

An article comprising a machine-readable medium embodying information

indicative of instructions that when performed by one or more machines result in

operations comprising:

Determining whether a storage device, in a data processing system running an

operating system (Stevens ¶59 lines 15 – 17), includes a protected area (Stevens ¶58),

the operating system including a hardware abstraction layer (Stevens ¶85 Stevens

includes mention of a deficiency in the Microsoft Windows operating system. The

reference is made to point to possible improvements when Microsoft Windows is used

as the operating system. Microsoft Windows includes a Hardware Abstraction Layer.);

Removing the storage area protection of the storage device from within the

running operating system and without rebooting the data processing system (Stevens

¶53 lines 10 – 13); and

Providing information derived from the formerly protected storage area to a data

processing system detection tool (Stevens ¶64 lines 10 – 11).

As per claim 3, Stevens teaches:

Checking whether the storage device supports a protected area specification

(Stevens ¶35 lines 2 – 3); and

Identifying a protected storage capacity and an unprotected storage capacity of

the storage device (Stevens ¶59 lines 4 – 10.)

As per claim 4, Stevens teaches:

Removing the storage area protection comprises volatilely resetting a storage

address value (Stevens ¶74 lines 5 – 9.)

As per claim 5, Stevens teaches:

Resetting a storage address value comprises calling a MAX ADDRESS

command (Stevens ¶74 lines 5 – 9.)

As per claim 6, Stevens teaches:

Determining and removing occur in a kernel-mode of the data processing system

(It is inherent to the system disclosed by Stevens that these processes occur in kernel-

mode because accessing hardware communicatively attached to the processing system

requires the use of the drivers loaded into the kernel of the operating system.)

As per claim 8, Stevens teaches:

Scanning the formerly protected storage area; and

Identifying file system information in the formerly protected storage area (Stevens

¶81.)

As per claim 9, Stevens teaches:

Providing the information derived from the formerly protected storage area

comprises sending the information over a transport medium to the data processing

system detection tool (It is inherent to the system taught by Stevens that information

obtained from the formerly protected storage area is sent over a transport medium. A

hard drive is inherently attached to the data processing system via bus architecture and

sent to the calling program.)

As per claim 10, Stevens teaches:

The operations further comprise reconstructing a file system of the formerly

protected storage area to derive the information (Stevens ¶81.)

As per claim 36, Stevens teaches:

Means for directly accessing a protected area of a storage device in a data

processing system live from a high level operating system without a reboot (Stevens

¶64); and means for delivering information derived from the protected storage area to a

data processing system detection tool (Stevens ¶64 Once access is granted the data is

accessible by the calling process via the system bus.)


## *Claim Rejections - 35 USC § 103*


3.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.      Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pre-

Grant Publication 2002/0133702 (Stevens) and further in view of U.S. Pre-Grant

Publication 2005/0262342 (Field).

As per claim 2:

Stevens teaches a graphical user interface (GUI) (Stevens ¶37 lines 9 – 10.)

Stevens does not teach virtual memory management and multitasking.

Field teaches virtual memory management (Field ¶6 lines 3 – 4) and multitasking

(Field ¶50 lines 10 – 15).  It would have been obvious to one of ordinary skill in the art at

the time of the invention to combine these features of Field with Stevens since virtual

management is a well known efficient technique in the art (Field ¶6 lines 1 – 3) and

since multitasking reduces idle processing time and wasted processor cycles (Field ¶50

lines 10 – 15.)

5.    Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Pre-Grant Publication 2002/0133702 (Stevens) and further in view of U.S. Pre-Grant

Publication 2005/0193115 (Chellis et al).

As per claim 11:

Stevens does not teach selecting the transport medium.

Chellis teaches a plurality of storage mediums and transport mediums (¶84 lines

1 – 9 Chellis lists a multiplicity of storage mediums.  Chellis Fig. 1 shows a remote

computer 758 with options to attach via modem 768 attached to a serial port interface

752 or via over LAN 762 connected to network adaptor 766.)  It would have been

obvious to one or ordinary skill in the art at the time of the invention to combine this

feature of Chellis with Stevens since it provides additional storage mediums (Chellis ¶84

lines 9 - 14) thereby increasing the storage capacity of the system and allows for

multiple computers to access the same information.

6.    Claims 17 – 20, 24, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Pre-Grant Publication 2002/0133702 (Stevens) in further view of

U.S. Pre-Grant Publication 2006/005201 (Puryear).

As per claim 17:

Stevens teaches determining if a storage device contains a protected area

(Stevens ¶59 lines 6 – 10) and reversibly removing the storage protection area (Stevens

¶53 lines 10 - 13.)

Stevens teaches using a kernel-mode software module to perform operations from within the operating system. It is inherent to the computer system that operating system software communicates with hardware through the kernel.

Stevens does not teach loading a kernel-mode software module into a computer system running an operating system.

Puryear teaches loading kernel-module software without rebooting (Puryear ¶13 The graph builder can add, delete, and modify modules all while the graph builder is running.) It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Puryear with Stevens since the feature reduces delays from rebooting the system.

As per claim 18:

Stevens teaches a machine-readable medium communicatively coupled to the computing system (It is inherent to the system taught by Stevens that the machine-readable medium is communicatively coupled to the computing system via bus architecture.)

Puryear teaches dynamically loading the kernel-mode software as addressed in claim 17.

As per claim 19:

Stevens does not teach optical disks.

Puryear teaches the machine-readable medium comprises an optical disk (Puryear ¶37 lines 7 – 10.) It would have been obvious to one of ordinary skill in the art

at the time of the invention to combine Puryear with Stevens since optical drives allow

for the use of optical mediums (Puryear lines 8 – 10.)

As per claim 20:

Stevens teaches scanning the formerly protected storage area and identifying file

system information in the formerly protected storage area (Stevens ¶81.)

As per claim 24:

Stevens teaches a data processing system detection tool (Stevens ¶60 line 2 "a

calling process".)

Stevens teaches using modules providing access to the protected area of a hard

drive (Stevens ¶64).

Stevens does not teach loading the kernel-mode software after booting the

computer.

Puryear teaches loading kernel-module software without rebooting (Puryear ¶13

The graph builder can add, delete, and modify modules all while the graph builder is

running.) It would have been obvious to one of ordinary skill in the art at the time of the

invention to combine Puryear with Stevens since the features reduces delays from

rebooting the system.

As per claim 26:

Stevens teaches that the detection tool is a stand alone application (Stevens ¶60

line 2 "a calling process".)

Stevens does not teach the detection tool is a client application.

Sales teaches the detection tool is a client application (Sales Fig. 1 The host source drive with the HPA communicates with the client duplicating machine to derive information from the HPA.)


7.     Claims 21 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pre-Grant Publication 2002/0133702 (Stevens) and further in view of U.S. 2006/0005201 (Puryear) and U.S. Pre-Grant Publication 2002/0133714 (Sales).

As per claim 21:

Stevens does not explicitly teach sending information derived from the formerly protected storage area over a selected transport medium to a data processing system detection tool.

Sales teaches sending information derived from a protected storage area over a transport medium.  (Sales Fig. 1 shows a source storage medium containing a Host Protected Area.  The information is transferred over the transport medium shown to the target drives Target 1 – Target N.)  It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Sales with Stevens since Sales allows for duplication of HPA's during copying (Sales ¶31 lines 5 – 10.)


## Allowable Subject Matter

8.     Claims 22, 25, 27 - 29, 31 - 35, and 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

## *Conclusion*

9.     Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory P. Hein whose telephone number is 571-272-4180.  The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210.  The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.  Status information for published applications may be obtained from either Private PAIR or Public PAIR.  Status information for unpublished applications is available through Private PAIR only.  For more information about the PAIR system, see http://pair-direct.uspto.gov.  Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

01/17/2006
Gregory Hein

MANO PADMANABHAN
SUPERVISORY PATENT EXAMINER